REMARKS

The Examiner's rejection of claims 1-5 is incorrect and should be withdrawn.

Drew, the principal reference relied upon by the Examiner, is a non-diesel internal combustion engine in which the fuel/air mixture enters through aperture 26 into the space between the bottom of plate 12 and the top of cylinder head 4. Compound piston assembly 5 descends in cylinder 2. Spark plug 30 ignites the fuel/air mixture. See column 3, line 61 - column 4, line 20.

Jordan, the auxiliary reference relied upon by the Examiner, discloses a non-diesel internal combustion engine in which air is admitted into cylinder bore 8 through inlet opening 29 above the top of piston 2. The Examiner has taken the position that air introduced into a second bore "forces said compound piston assembly downwardly in the cylinder toward the bottom of its stroke". This is entirely incorrect. Jordan says only (column 4, lines 5-6) that "Air is admitted into cylinder bore 8 through inlet opening 29". There being nothing in the entire Jordan specification to suggest that air so admitted is under such pressure as to force the compound piston assembly downwardly, nothing can be read in Jordan in the manner proposed by the Examiner. The top of piston 2 has a reduced diameter cylindrical upper portion 33 provided with a concave upper surface 36 which enters portion 39 to form combustion chamber 41. Fuel is introduced into combustion chamber 41 through conduit 17 and fuel injector 13. Spark plug 11, located above upper surface 36, ignites the fuel/air mixture in the combustion chamber 41, and the products of combustion (not the air admitted into cylinder bore 8 through inlet opening 29) cause piston 2 to descend (the power stroke).

In the present invention, a diesel engine, the combustion chamber 21 is located below the top of small diameter piston 8, and the diesel fuel injector 19 communicates with this combustion chamber 21, again below the top of small diameter piston 8. Air is introduced, through conduit 24, into bore 10, bearing (i.e., under pressure) against the top of small diameter piston 8 thereby to force the compound piston assembly 5 downwardly in central bore 3 of cylinder 2.

Claims 1-5 of this application specifically recite, inter alia:

(e) means to introduce air into said second bore [which extends through the cylinder head, per (d)],

(g) a combustion chamber within said cylinder and defined by the upper face of said main piston and the lower portion of said cylinder head,

(h) a diesel fuel injector communicating with said combustion chamber and adapted to deliver diesel fuel into said combustion chamber,

(i) said air introduced into said second bore bearing against the first end of said first piston (the small diameter piston) and forcing said compound piston assembly downwardly in said cylinder.

The structure of the present invention, as defined by claims 1-5, is entirely different and distinct from Drew taken with Jordan.

Neither Drew nor Jordan have the critical elements of the present invention as noted above in claims 1-5. To combine Drew and Jordan, as suggested by the Examiner, but not as suggested by either of these references, would still not supply these critical elements. To meet the clear terms of claims 1-5, both Drew and Jordan would necessarily have to be extensively reconstructed in a manner not implicit in either reference, but only in the manner of the present invention, and this is not a proper ground for rejection.

Accordingly, the Examiner is respectfully requested to withdraw his objection to claims 1-5, and to allow this case to issue.

All of which is

Respectfully submitted

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